

REPORT: FE-19-97

RAILROAD: Norfolk Southern Railway Company (NS)

LOCATION: Rowesville, South Carolina

DATE TIME: June 24, 1997, 8:58 p.m., EST

PROBABLE CAUSE:

The Conductor did not insure the switch was in the proper position prior to authorizing his train to make a reverse movement.

EMPLOYEE: **Craft..... Transportation**

 Activity..... Switching

 Occupation..... Conductor

 Age..... 21 years

 Length of Service..... Two years, six months

 Last Rules Training..... Feb. 3, 1997

 Last Safety Training..... May 21, 1997

 Last Physical Examination..... January 1995

Circumstances Prior to the Accident

On June 24, 1997, a 2-person Norfolk Southern (NS) Train Crew (Conductor and Engineer) was called to perform duties on NS Local Freight Train No. P28 from Andrews Yard, Columbia, South Carolina, to Rowesville, South Carolina, and the return trip. The Crew reported for duty at 6 p.m. at the Andrews Yard engine house. The two Crew Members were regularly assigned to Train P28. They had worked together on June 23, 1997, the previous day, reporting for duty at 5 p.m. Working a total of 12 hours, they completed their tour of duty at 5 a.m. The Crew was off duty for a total of 13 hours, thus completing the required statutory off-duty period prior to reporting for duty on June 24, 1997.

Prior to departing the engine house, the Crew contacted the Train Dispatcher and the Andrews Yard Yardmaster for instructions. They received a Track Warrant from the Train Dispatcher to operate from Andrews Yard (Columbia) milepost (MP) SC127.5 eastward to Rowesville MP SC71. The Yardmaster informed the Crew Members that their locomotives were NS 5189 (east) and NS 5059 (west), and that their train was located on the westbound track. The Crew Members proceeded from the engine house to the yard office where they received their industrial

switching orders. They discussed the work to be performed and proceeded to couple the locomotives to the train (nine loads, 1,163 tons, and 687 feet in length).

Train P28 departed Andrews Yard in an eastward direction at approximately 6:45 p.m., and proceeded to Pasta Place at MP SC117, which was the first customer to be switched. At this location, the Crew set off five loaded cars and pulled two empty cars. This work was completed at approximately 7:15 p.m.

Train P28 then proceeded in an eastward direction to the next customer, Associate Chemicals, at MP SC76. At Associate Chemicals, the Crew re-spotted two cars and departed for Rowesville Siding with six cars. Rowesville Siding accommodated about 30 cars and was the turn-around point for Train P28.

The Crew arrived in Rowesville between 7:30 p.m. and 7:40 p.m. There were seven cars in the siding from the previous day. (Note: Train P28 typically left cars at this location to be placed on consists, at the request of various companies, for return trips to Andrews Yard.) Train P28 operated to the east end of the siding, where the Conductor dismounted, removed the end-of-train device (EOT), removed the derail, and lined the switch for the siding. The Train Crew entered the siding, coupling the six cars in their train to the seven cars already standing in the siding. The Conductor then uncoupled the locomotives from the 13 cars.

Upon completion of this move, the Conductor instructed the Engineer to operate the locomotives in an eastward direction to clear the switch. The Conductor then re-applied the derail, lined and locked the switch, removed the EOT from the ground, and placed it on the platform of the east locomotive (NS 5189). The Crew proceeded to the west end of the siding. The Conductor stopped the locomotives after they had cleared the switch at the west end of the siding. At this point, the Engineer changed operating stations (locomotives) for the return trip to Andrews Yard. He would now be in a position to operate from the west locomotive (NS 5059).

The operating controls for NS 5059 were on the south side of the mainline. The siding and the switch were on the north side of the mainline, which was the side from which the Conductor was directing the movement. The Conductor removed the EOT from the platform of NS 5189 and placed it on the ground near the switch. He unlocked and lined the mainline switch for the siding, removed the derail, and instructed the Engineer to shove east to a coupling, using specified car lengths via his portable radio.

After coupling to the 13 cars in the siding, the Conductor coupled the air hoses between the locomotive and the west car in the siding and instructed the Engineer to pull west, stopping at the fifth car in the siding. The Conductor made a cut between the fifth and sixth cars in the siding, and instructed the Engineer to pull west out of the siding with five cars.

The Conductor stopped the move clear of the mainline switch, applied the EOT to the fifth car, and instructed the Engineer to shove back five car lengths stating, "You're clear for 30; shove

back five.” The Conductor’s intention was to assemble the train for its return trip to Columbia.

At the time of the accident, the temperature was 80° F, the weather conditions were hot and humid, and the sky was clear with full visibility for this hour (8:58 p.m.). It was clear enough that the Conductor was working without a lantern.

The Accident

The purpose of the switching moves was to cut the two rear cars off of the mainline, and then return to the siding with three cars and finish switching. After the Conductor had instructed the Engineer to shove back five cars, his next communication was to start calling (via radio) the number of car lengths left to go in the shoving move. The Conductor called “Four,” then “Three,” and that was the last communication the Engineer heard from the Conductor.

When the Engineer did not receive another signal from the Conductor, he stopped the train movement within 1 ½ car lengths. The Engineer made several attempts to reach the Conductor via radio, but there was no response. The Engineer went to the other side of the cab, looked out the window, and saw the Conductor lying on the ground. His feet were pointing in a northward position, on the north side of the north rail of the siding. The Engineer dismounted the locomotive and went to check on the Conductor, whom he found severed at the waist. His upper torso was underneath the fourth car (Car NW 177259) from the locomotives lying between the rails. The Conductor had been run over by both sets of trucks of the fifth car from the locomotives (SOU 88568) and the east trucks of NW 177259. The Engineer immediately called for help.

(Please see the attached two diagrams of the Rowesville Siding/Pass Track to better visualize the accident scene and chain of events that led up to the fatality.)

Post-Accident Investigation

The post-accident investigation disclosed that the Conductor had failed to line the switch for the mainline after applying the EOT to the rear of Rail Car SOU 88568. After pulling west from the siding with five cars and applying the EOT, the Conductor instructed the Engineer to shove east, informing the Engineer that the track was clear for 30 car lengths, but only to shove back five car lengths. The Conductor’s intent was to cut two cars off of the mainline and return to the siding with the three remaining cars.

Evidence indicates that as the shoving move began, the Conductor turned away from the rolling equipment and walked toward the west in the foul of the siding track. At the same time, utilizing his radio, he was issuing movement instructions to the Engineer. The Conductor’s failure to properly line the main track switch resulted in the cars re-entering the siding and

striking him in the back. As result of being struck by the rolling equipment, the Conductor was knocked to the ground and run over by his own train.

During his interview, the Engineer stated that after thinking about everything that had happened, he remembered that when the Conductor had radioed three car lengths, he had sounded somewhat faint. The Engineer also stated that he did not remember exactly how fast he was shoving, but estimated that the move was probably being made at between 5 and 10 mph. The tapes from the locomotive event recorder indicated that the maximum speed attained during the move was 8 mph.

A re-enactment of the shoving move performed by company officials indicated that the movement could be stopped within the required distance specified in the operating rules. However, it should be noted that these tests were conducted in anticipation of applying the brakes at a specified location.

Emergency response came from the Orangeburg County EMS, Branchville City Volunteer Fire Department, and South Carolina State Police. A representative from the Orangeburg County EMS Unit reported receipt of a call to respond at 10:18 p.m., and the unit arrived on the scene at 10:27 p.m. The Orangeburg County EMS personnel departed at 10:52 p.m.; however, they did not remove the body. The Branchville Volunteer Fire Department removed and carried the body to the Orangeburg County Regional Medical Center.

The toxicological tests FRA required on the deceased were completed at 5 a.m. at the Regional Medical Center.

NS officials were questioned about the disparity between the time the accident had occurred (8:58 p.m.) and the time the Orangeburg County EMS received a call (10:06 p.m.). Various excuses were given, such as the Dispatcher was working with a trainee; there was a mainline derailment at High Point, North Carolina; and the Dispatchers had difficulty determining which emergency service provider had jurisdiction of the accident area. However, the Railroad Police were not notified until 9:37 p.m. FRA investigators concluded that the Train Dispatchers' office failed to use this resource to obtain assistance in locating the appropriate emergency services.

The investigation revealed that the Conductor had frequent contacts from a variety of NS officials regarding safety compliance (18 safety contacts) and rules training (17 rules contacts). It should be noted that several different rules were discussed during each contact. NS reports that the Conductor's most recent operating rules class was Feb. 3, 1997. His last safety contact was May 21, 1997, and his last rules check was conducted on June 22, 1997. NS officials stated that while performing duties at the Rowesville Siding/Pass Track, that the Conductor was not in compliance with NS General Rule (GR) No.14, which resulted in his fatal injuries. The Conductor had been employed by NS for 2 ½ years (1/30/95), which means his last physical was a pre-employment exam. According to employment records, the Conductor had not

been injured during his career, but had received a 15-day suspension for a run-thru switch on Dec. 17, 1996.

NS officials reported that within the past year, there had been a noticeable increase in GR 14

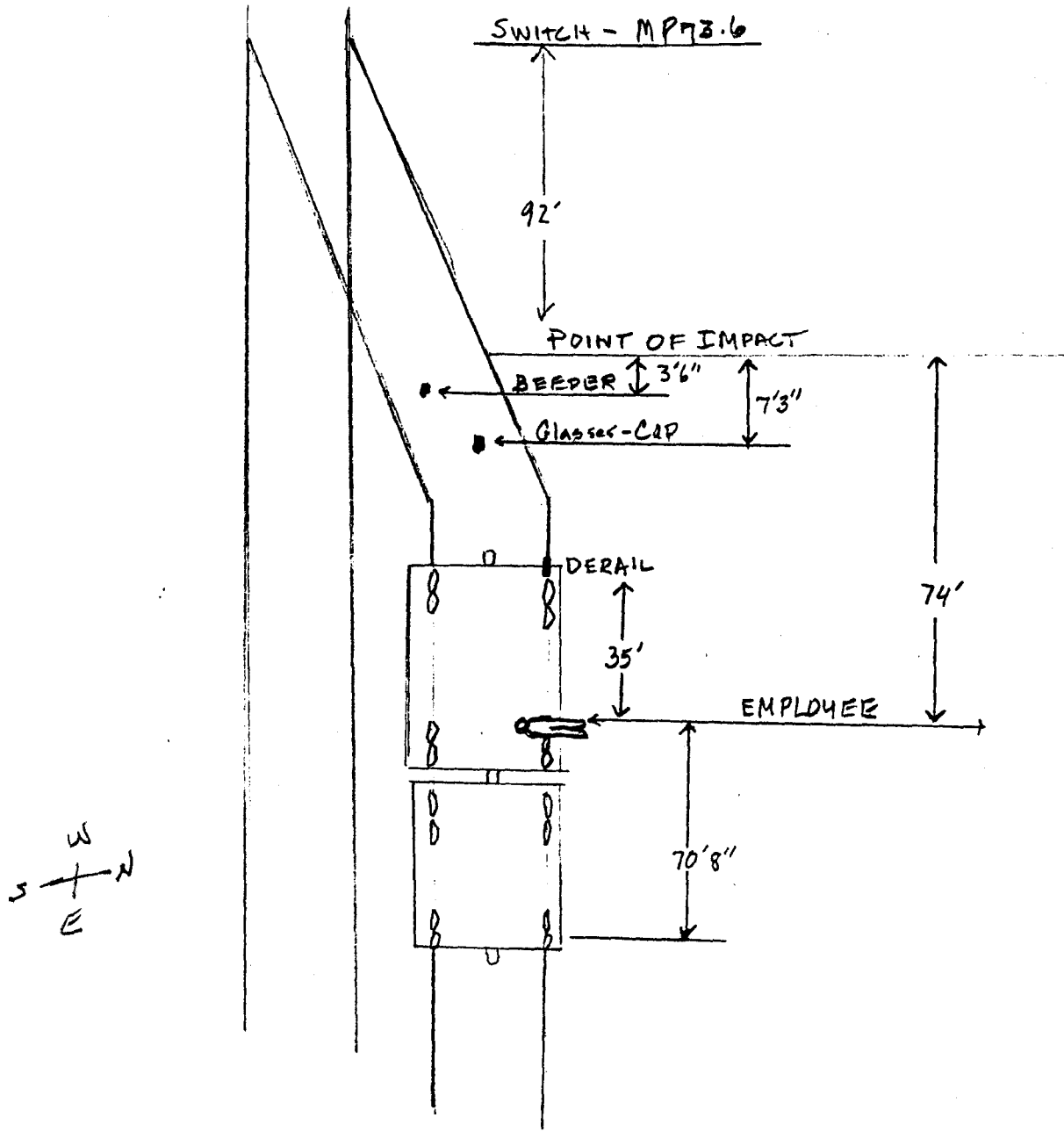
violations.

General Rule No. 14 states:

Employees must not stand on the track in front of closely approaching equipment, or step between coupled moving cars or engines, for any reason. They must not step between or immediately in front of standing cars or immediately in front of standing cars or engines unless necessary in the performance of duty, and then only after arranging for protection against the equipment being coupled to or moved.

Employees must not go between cars to adjust a drawbar or knuckle unless the cars are separated by at least 25 feet. (Exception: When an approved drawbar alignment device is used, [they should] be governed by special instructions.) When adjusting a coupler or knuckle, they must stand to one side with feet clear of the falling knuckle. When walking around the end of a standing car or between standing separated cars, employees must allow at least 10 feet of room between themselves and the nearest car, and they must expect sudden movement by cushion-under-frame draft gear.

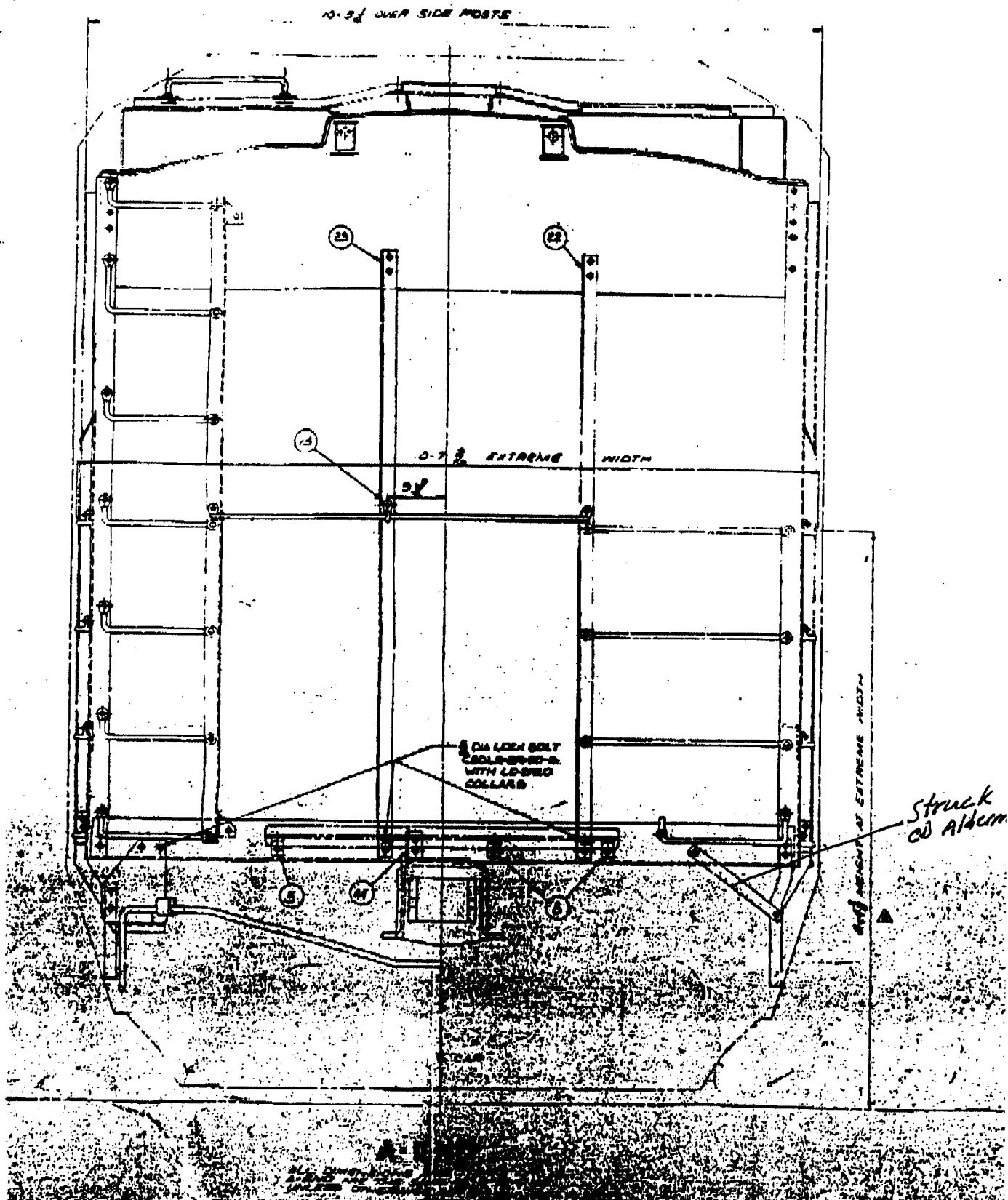
In response to the disturbing trend of non-compliance with GR 14, NS, the Brotherhood of Locomotive Engineers, and the United Transportation Union had produced a safety film, entitled "First Quarter - South End," to highlight the danger involved with this type of violation. NS advised FRA that the fatally injured Conductor had viewed this film in February 1997 and May 1997.



ACCIDENT SCENE

MP SC 73.6

ROWESVILLE, SC



HCS 27